

The normal type N series of Metal Oxide Varistor (MOV) are radial lead varistors (also known as Voltage Dependent Resistors or VDRs) that are designed to be used continuously across AC line primary or DC circuit for transient voltage and surge suppression.

Operating Temperature -40°C~+125°C

■ **RECOGNITION** : made for RFE by UL shop Joyin



| Agency | File Number | Monogram |
|--------|--|----------|
| UL/cUL | E325508 | |
| VDE | Certificate No. 005937 | |
| CQC | CQC07001019159 /9161/9162/9163/9164 | |

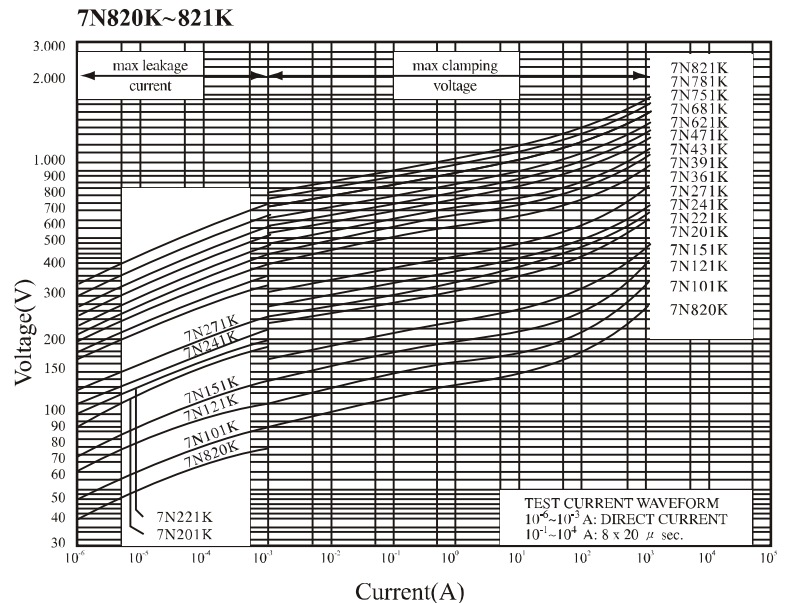
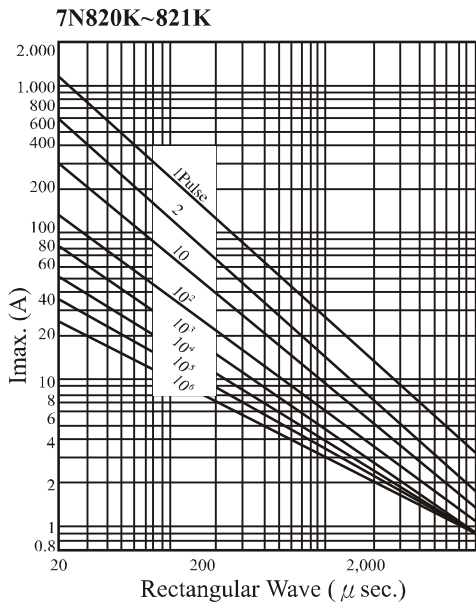
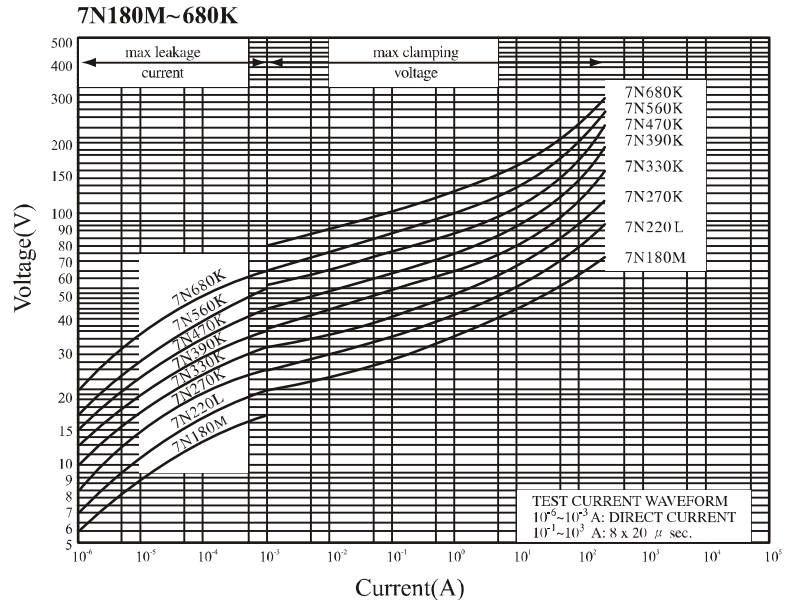
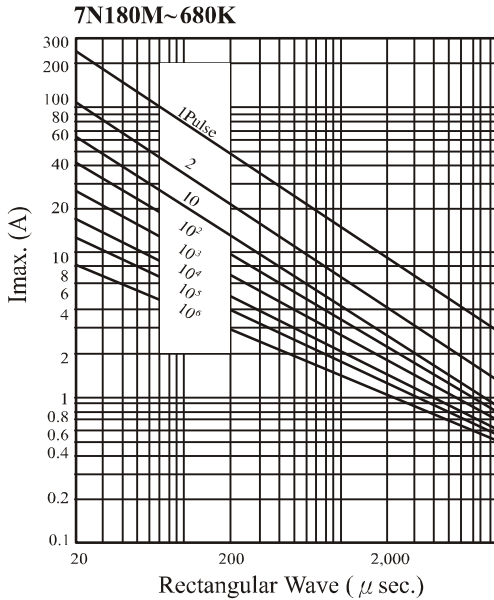
■ **CHARACTERISTICS & RATINGS**

| Part Number | Varistor Voltage at 0.1mA | | Maximum Allowable Voltage | | Maximum Clamping Voltage | | Withstanding Surge Current (8/20µs) | Nominal Discharge Current (8/20µs) | Rated Wattage | Energy (10/1000µs) |
|-----------------|---------------------------|-----------|---------------------------|--------|--------------------------|--------|-------------------------------------|------------------------------------|---------------|--------------------|
| | DC (V) | Tolerance | AC rms (V) | DC (V) | V@ ic (V) | ic (A) | | | | |
| JVT07N180M65*** | 18 | 20% | 11 | 14 | 36 | 2.5 | 250 | 0.2 | 0.02 | 1.2 |
| JVT07N220L65*** | 22 | 15% | 14 | 18 | 43 | | | | | 1.4 |
| JVT07N270K65*** | 27 | 10% | 17 | 22 | 53 | | | | | 1.7 |
| JVT07N330K65*** | 33 | | 20 | 26 | 65 | | | | | 2.2 |
| JVT07N390K65*** | 39 | | 25 | 31 | 77 | | | | | 2.4 |
| JVT07N470K65*** | 47 | | 30 | 38 | 93 | | | | | 3 |
| JVT07N560K65*** | 56 | | 35 | 45 | 110 | | | | | 3.5 |
| JVT07N680K65*** | 68 | | 40 | 56 | 135 | | | | | 4.3 |
| JVT07N820K65*** | 82 | | 50 | 65 | 135 | 5.5 | | | | |
| JVT07N101K65*** | 100 | | 60 | 85 | 165 | 7 | | | | |
| JVT07N121K65*** | 120 | 75 | 100 | 200 | 8 | | | | | |
| JVT07N151K65*** | 150 | 95 | 125 | 250 | 11 | | | | | |
| JVT07N181K65*** | 180 | 115 | 150 | 300 | 13 | | | | | |
| JVT07N201K65*** | 200 | 130 | 170 | 340 | 14.3 | | | | | |
| JVT07N221K65*** | 220 | 140 | 180 | 360 | 15.5 | | | | | |
| JVT07N241K65*** | 240 | 150 | 200 | 395 | 16.8 | | | | | |
| JVT07N271K65*** | 270 | 175 | 225 | 455 | 19.8 | | | | | |
| JVT07N301K65*** | 300 | 195 | 250 | 505 | 21 | | | | | |
| JVT07N331K65*** | 330 | 210 | 275 | 550 | 23 | | | | | |
| JVT07N361K65*** | 360 | 230 | 300 | 595 | 26 | | | | | |
| JVT07N391K65*** | 390 | 250 | 320 | 650 | 30 | | | | | |
| JVT07N431K65*** | 430 | 275 | 350 | 710 | 33 | | | | | |
| JVT07N471K65*** | 470 | 300 | 385 | 775 | 35 | | | | | |
| JVT07N511K65*** | 510 | 320 | 418 | 842 | 37 | | | | | |
| JVT07N561K65*** | 560 | 350 | 460 | 920 | 39 | | | | | |
| JVT07N621K65*** | 620 | 385 | 505 | 1025 | 41 | | | | | |
| JVT07N681K65*** | 680 | 420 | 560 | 1120 | 43 | | | | | |
| JVT07N751K65*** | 750 | 460 | 615 | 1240 | 45 | | | | | |
| JVT07N781K65*** | 780 | 485 | 640 | 1290 | 46 | | | | | |
| JVT07N821K65*** | 820 | 510 | 670 | 1355 | 47 | | | | | |

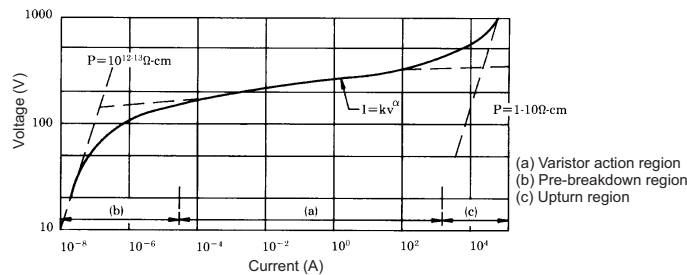
*** Replace with Lead & Packaging code

■ **7mm PULSE LIFETIME RATINGS**

■ **7mm V-I CHARACTERISTIC CURVE**

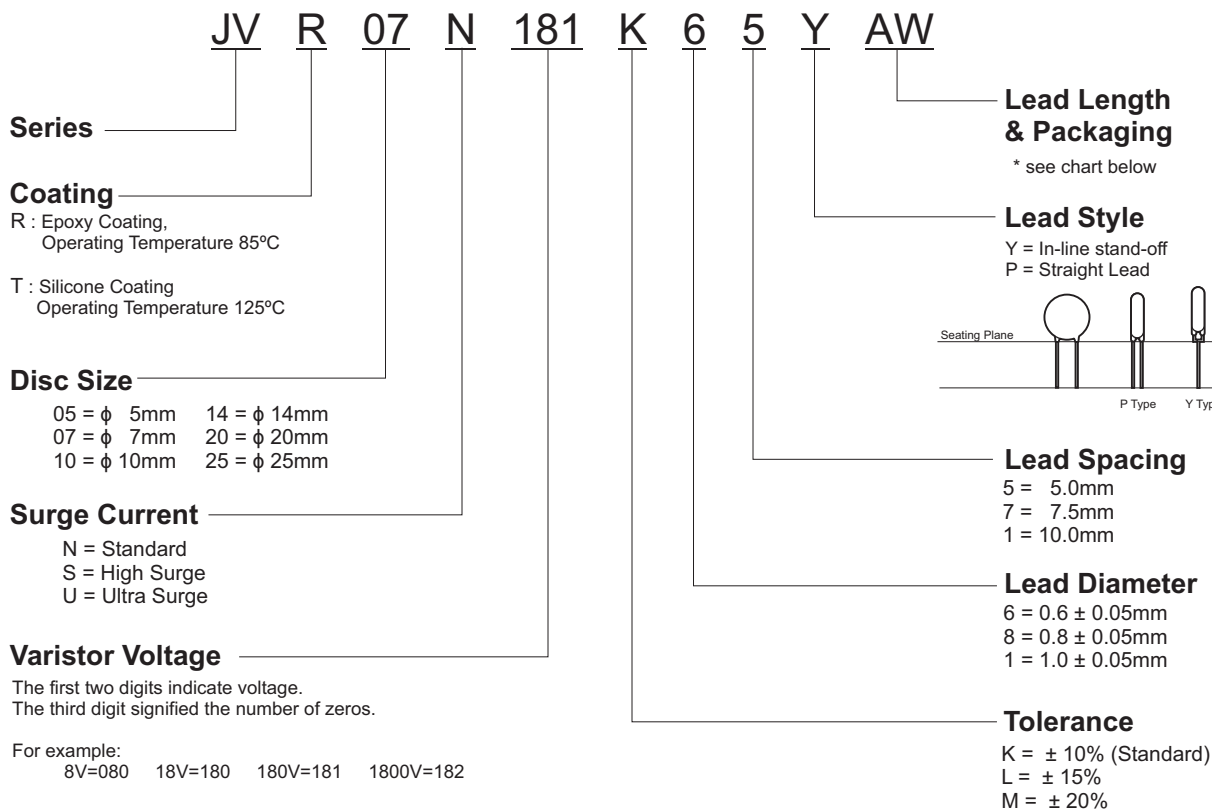


■ **CURRENT - VOLTAGE CHARACTERISTICS**

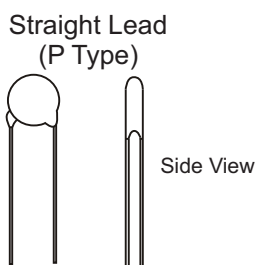
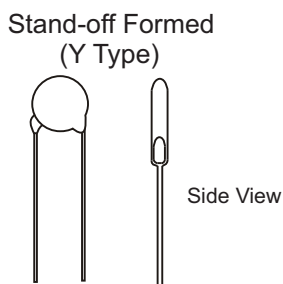


Operating & Storage temperature Range : -40°C to +85°C
Temperature Coefficient of Voltage : 0~0.05% / °C max.

■ PART NUMBER EXAMPLE



■ LEAD LENGTH & PACKAGING

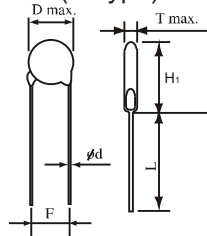


| Lead Type | Code | Dimension | Package |
|--------------|------|-----------------------|---------|
| Y Type Leads | 50 | L = 5 ± 1mm | Bulk |
| | U4 | L = 24mm min. | Bulk |
| | AW | H ₀ = 16mm | Ammo |
| | RW | H ₀ = 16mm | Reel |
| P Type Leads | 50 | L = 5 ± 1mm | Bulk |
| | U5 | L = 25mm min. | Bulk |
| | AY | H ₀ = 20mm | Ammo |
| | RY | H ₀ = 20mm | Reel |

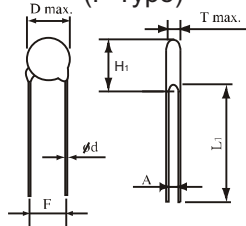
* H₀ see the drawing on page 5

■ **LEAD STYLES & DIMENSIONS (mm)**

Stand-off Formed
(Y Type)



Straight Lead
(P Type)



| Diameter | 5mm | 7mm | 10mm | 14mm | 20mm |
|----------|------|------|--------|--------|--------|
| D max | 7.5 | 9.0 | 12.5 | 16.5 | 23.0 |
| d ± 0.05 | 0.6 | 0.6 | 0.8 | 0.8 | 1.0 |
| F ± 1.0 | 5.0 | 5.0 | 7.5 | 7.5 | 10.0 |
| H max. | 11.0 | 13.0 | 18/*19 | 22/*23 | 28/*29 |
| L1 max. | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 |
| L min. | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 |

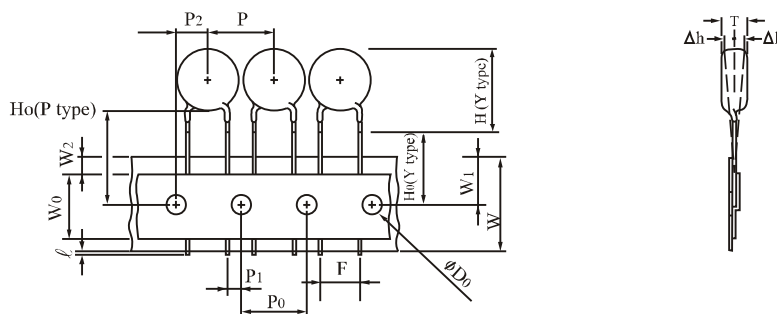
* Just for 182K

Table of T & H1 max, A ± 0.8

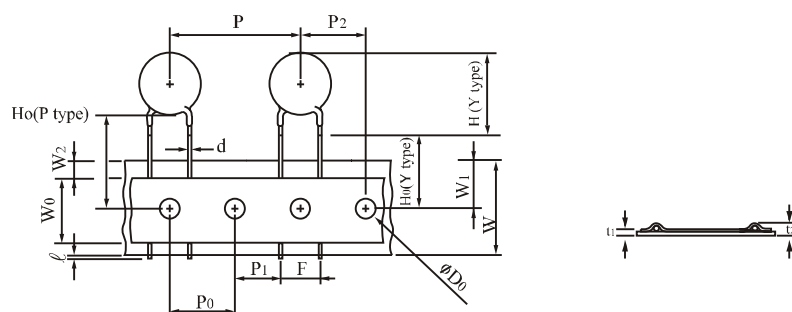
| Diameter | 5mm | | | 7mm | | | 10mm | | | 14mm | | | 20mm | | |
|----------|-----|-----|------|-----|-----|------|------|-----|------|------|------|------|------|------|------|
| | T | A | H1 | T | A | H1 | T | A | H1 | T | A | H1 | T | A | H1 |
| 180M | 4.5 | 0.8 | 10.5 | 4.5 | 0.8 | 12 | 4.9 | 0.8 | 15.5 | 5 | 0.9 | 19.5 | --- | --- | --- |
| 220M/L | 4.5 | 0.9 | 10.5 | 4.5 | 0.9 | 12 | 4.9 | 0.9 | 15.5 | 5 | 1 | 19.5 | 5.3 | 1 | 26.5 |
| 270M/K | 4.7 | 0.9 | 10.5 | 4.7 | 0.9 | 12 | 5.1 | 0.9 | 15.5 | 5.2 | 1.1 | 19.5 | 5.4 | 1.1 | 26.5 |
| 330M/K | 4.7 | 1 | 10.5 | 4.7 | 1 | 12 | 5.1 | 1 | 15.5 | 5.2 | 1.2 | 19.5 | 5.4 | 1.2 | 26.5 |
| 390L/K | 4.7 | 1.2 | 10.5 | 4.7 | 1.2 | 12 | 5.1 | 1.2 | 15.5 | 5.2 | 1.4 | 19.5 | 5.4 | 1.4 | 26.5 |
| 470L/K | 5 | 1.2 | 10.5 | 5 | 1.2 | 12 | 5.5 | 1.2 | 15.5 | 5.6 | 1.4 | 19.5 | 5.6 | 1.4 | 26.5 |
| 560L/K | 5 | 1.4 | 10.5 | 5 | 1.4 | 12 | 5.5 | 1.4 | 15.5 | 5.6 | 1.6 | 19.5 | 5.6 | 1.6 | 26.5 |
| 680L/K | 5.5 | 1.7 | 10.5 | 5.5 | 1.7 | 12 | 6 | 1.7 | 15.5 | 6.1 | 1.9 | 19.5 | 6.1 | 1.9 | 26.5 |
| 820K | 3.8 | 0.8 | 10.5 | 3.8 | 0.8 | 12 | 4.3 | 0.8 | 15.5 | 4.4 | 1 | 19.5 | 5 | 1.1 | 26.5 |
| 101K | 3.9 | 0.8 | 10.5 | 3.9 | 0.8 | 12 | 4.4 | 0.8 | 15.5 | 4.5 | 1 | 19.5 | 5.1 | 1.2 | 26.5 |
| 121K | 4.1 | 0.9 | 10.5 | 4.1 | 0.9 | 12 | 4.5 | 0.9 | 15.5 | 4.6 | 1.1 | 19.5 | 5.3 | 1.3 | 26.5 |
| 151K | 4.5 | 1.2 | 10.5 | 4.5 | 1.2 | 12 | 4.9 | 1.2 | 15.5 | 5.1 | 1.4 | 19.5 | 5.6 | 1.6 | 26.5 |
| 181K | 4.1 | 1 | 10.5 | 4.1 | 1 | 12 | 4.5 | 1 | 15.5 | 4.7 | 1.2 | 19.5 | 5.2 | 1.4 | 26.5 |
| 201K | 4.2 | 1 | 10.5 | 4.2 | 1 | 12 | 4.6 | 1 | 15.5 | 4.8 | 1.2 | 19.5 | 5.3 | 1.47 | 26.5 |
| 221K | 4.3 | 1.1 | 10.5 | 4.3 | 1.1 | 12 | 4.7 | 1.1 | 15.5 | 4.9 | 1.3 | 19.5 | 5.4 | 1.5 | 26.5 |
| 241K | 4.4 | 1.1 | 10.5 | 4.4 | 1.3 | 12 | 4.8 | 1.3 | 15.5 | 5 | 1.5 | 19.5 | 5.5 | 1.7 | 26.5 |
| 271K | 4.6 | 1.3 | 10.5 | 4.6 | 1.4 | 12 | 5 | 1.4 | 15.5 | 5.2 | 1.5 | 19.5 | 5.7 | 1.9 | 26.5 |
| 301K | 4.8 | 1.3 | 10.5 | 4.8 | 1.5 | 12 | 5.2 | 1.6 | 15.5 | 5.4 | 1.7 | 19.5 | 5.9 | 2.1 | 26.5 |
| 331K | 4.9 | 1.3 | 10.5 | 4.9 | 1.5 | 12 | 5.3 | 1.6 | 15.5 | 5.5 | 1.7 | 19.5 | 6 | 2.1 | 26.5 |
| 361K | 5.1 | 1.8 | 10.5 | 5.1 | 1.9 | 12 | 5.5 | 1.9 | 15.5 | 5.7 | 2.1 | 19.5 | 6.2 | 2.3 | 26.5 |
| 391K | 5.3 | 2 | 11 | 5.3 | 2 | 12.5 | 5.7 | 2.2 | 16 | 5.9 | 2.2 | 20 | 6.4 | 2.4 | 26.5 |
| 431K | 6.1 | 2.1 | 11 | 6.1 | 2 | 12.5 | 6.5 | 2.5 | 16 | 6.7 | 2.5 | 20 | 7.2 | 2.7 | 26.5 |
| 471K | 6.4 | 2.2 | 11 | 6.4 | 2.3 | 12.5 | 6.8 | 2.6 | 16 | 7 | 2.7 | 20 | 7.5 | 2.9 | 27 |
| 511K | 6.6 | 2.5 | 11.5 | 6.6 | 2.5 | 13 | 7 | 3.1 | 16.5 | 7.2 | 3.1 | 20.5 | 7.7 | 3.3 | 27 |
| 561K | 6.9 | 2.8 | 11.5 | 6.9 | 2.8 | 13 | 7.3 | 3.4 | 16.5 | 7.5 | 3.4 | 20.5 | 8 | 3.6 | 27 |
| 621K | 7.2 | 3.1 | 11.5 | 7.2 | 3.1 | 13 | 7.6 | 4 | 16.5 | 7.8 | 3.8 | 20.5 | 8.3 | 4.1 | 27 |
| 681K | 7.5 | 3.4 | 11.5 | 7.5 | 3.4 | 13 | 8 | 4.4 | 16.5 | 8.2 | 4.1 | 20.5 | 8.7 | 4.4 | 27 |
| 751K | 7.9 | 3.7 | 11.5 | 7.9 | 3.7 | 13 | 8.4 | 4.4 | 16.5 | 8.6 | 4.3 | 20.5 | 9.1 | 4.5 | 27 |
| 781K | --- | --- | --- | 8.1 | 3.9 | 13 | 8.6 | 4.6 | 16.5 | 8.8 | 4.6 | 20.5 | 9.3 | 4.8 | 27 |
| 821K | --- | --- | --- | 8.3 | 4.1 | 13 | 8.8 | 4.6 | 16.5 | 9 | 4.6 | 20.5 | 9.5 | 4.8 | 27 |
| 911K | --- | --- | --- | --- | --- | --- | 9.4 | 5.4 | 16.5 | 9.6 | 5.4 | 20.5 | 10.1 | 5.7 | 27 |
| 102K | --- | --- | --- | --- | --- | --- | 9.9 | 5.4 | 16.5 | 10.1 | 5.6 | 20.5 | 10.7 | 5.8 | 27 |
| 112K | --- | --- | --- | --- | --- | --- | 10.5 | 5.7 | 16.5 | 10.7 | 6.1 | 20.5 | 11.2 | 6.3 | 27 |
| 122K | --- | --- | --- | --- | --- | --- | 10.9 | 6.3 | 17 | 10.9 | 6.7 | 21 | 11.3 | 6.9 | 27.5 |
| 142K | --- | --- | --- | --- | --- | --- | 11.9 | 7.4 | 17.5 | 11.9 | 7.8 | 21.5 | 12.8 | 8 | 28 |
| 162K | --- | --- | --- | --- | --- | --- | 13.1 | 8.6 | 18 | 13.1 | 9 | 22 | 13.7 | 9.2 | 28.5 |
| 182K | --- | --- | --- | --- | --- | --- | 14.3 | 9.8 | 18.5 | 14.3 | 10.2 | 22.5 | 14.7 | 10.4 | 29 |

■ TAPING SPECIFICATIONS

1/2" pitch



1.0" pitch

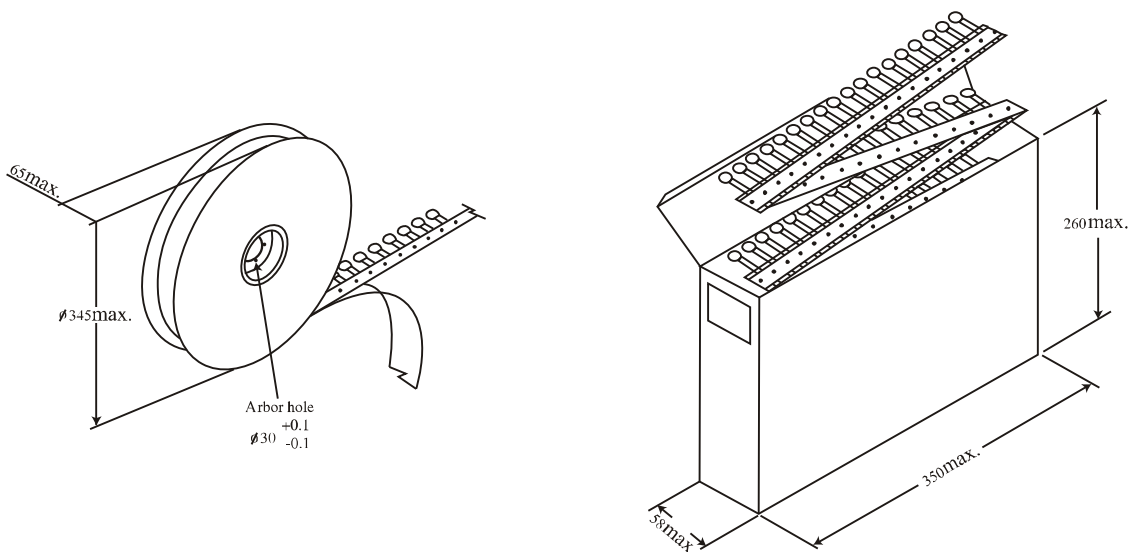


| Symbols | Item | 5 / 7 mm | 10 / 14mm | 20mm |
|-------------|--|---|---|---------------------------------------|
| | Cut out length | 1.1 mm max. | 1.1 mm max. | |
| H (Y Type) | Height of Top | See H Max. Table on page 4 | | |
| Ho (Y Type) | Height to seating plane | 16.0 ± 0.5mm (*±1.0mm) | 16.0 ± 0.5mm (*±1.0mm) | |
| Ho (P Type) | Height of component from hole center | 16.0 ~ 21.0 mm | 16.0 ~ 21.0 mm | |
| Δ h | Front to back deviation | 0 ± 2.0 mm | 0 ± 2.0 mm | |
| W | Carrier tape width | 18.0 ^{+1.0} _{-0.5} mm | 18.0 ^{+1.0} _{-0.5} mm | |
| W0 | Hold down tape width | 10.0mm | 10.0mm | |
| W1 | Sprocket hole position | 9.0 ^{+0.75} _{-0.5} mm | 9.0 ^{+0.75} _{-0.5} mm | |
| W2 | Adhesive tape position | 3.0 mm max. | 3.0 mm max. | |
| F | Component head spacing | 5.0 ^{+0.8} _{-0.2} mm | 7.5 ^{+0.8} _{-0.2} mm | 10 ^{+0.8} _{-0.2} mm |
| P | Pitch of component | 12.7 ± 1.0 mm | 25.4 ± 1.0 mm | |
| P0 | Sprocket hole pitch | 12.7 ± 0.3 mm | 12.7 ± 0.3 mm | |
| P1 | Lead length from hole center to lead | 3.85 ± 0.7 mm | 8.95 ± 0.7 mm | 7.7 ± 0.7 mm |
| P2 | Length from hole center to disk center | 6.35 ± 1.3 mm | 12.7 ± 1.3 mm | |
| D0 | Sprocket hole diameter | 4.0 ± 0.2 mm | 4.0 ± 0.2 mm | |
| d | Lead wire diameter | 0.6 ± 0.05 mm | 0.8 ± 0.05 mm | 1.0 ± 0.05 mm |
| T | Disk thickness | See Table of T Max. on page 4 | | |
| t1 | Total thickness tape | 0.7 ± 0.05 mm | 0.7 ± 0.05 mm | |
| t2 | Total thickness | 1.6 mm max. | 1.8 mm max. | |

* for manual line

■ **PACKAGING**

in mm



Quantity per Packing Unit

in Pcs

| Series Part No. | 5mm | | | 7mm | | | 10mm | | | 14mm | | | 20mm | | |
|--------------------|------------|------|------|------------|------|------|------------|------|------|------------|------|------|------------|------|------|
| | Bulk (box) | Reel | Ammo | Bulk (box) | Reel | Ammo | Bulk (box) | Reel | Ammo | Bulk (box) | Reel | Ammo | Bulk (box) | Reel | Ammo |
| 180M ~ 470K | 5000 | 1500 | 1500 | 5000 | 1500 | 1500 | 2500 | 1000 | 500 | 1500 | 750 | 500 | 750 | 500 | 500 |
| 560K ~ 680K | 5000 | 1500 | 1000 | 5000 | 1500 | 1000 | 2500 | 1000 | 500 | 1500 | 750 | 500 | 750 | 500 | 500 |
| 820K ~ 391K | 5000 | 1500 | 1500 | 5000 | 1500 | 1500 | 2500 | 1000 | 500 | 1500 | 750 | 500 | 750 | 500 | 500 |
| 431K ~ 471K | 5000 | 1500 | 1000 | 5000 | 1000 | 1000 | 2000 | 750 | 500 | 1500 | 750 | 500 | 750 | 500 | 500 |
| 511K ~ 821K | 4000 | 1000 | 1000 | 4000 | 1000 | 1000 | 1500 | 500 | 500 | 750 | 500 | 500 | 450 | 500 | 500 |
| 911K ~ 122K | --- | --- | --- | --- | --- | --- | 1500 | 500 | 350 | 750 | 500 | 350 | 450 | --- | --- |
| 142K ~ 182K | --- | --- | --- | --- | --- | --- | 750 | --- | --- | 450 | --- | --- | 300 | --- | --- |

| Packaging | Bulk (box) | Reel | Reel (14mm, 20mm) | Ammo (5mm, 7mm) | Ammo (10mm, 14mm) | Ammo (20mm) |
|------------------|-------------|--------------------|-------------------|-----------------|-------------------|-------------|
| Box size (mm) | 290*155*110 | 350*350*105 | 346*346*72 | 335*245*43 | 347*246*50 | 348*255*60 |
| Carton size (mm) | 328*310*250 | 370*370*590 | 370*370*468 | 515*354*258 | 515*364*246 | 535*365*275 |
| One carton with | 4 boxes | 5 boxes (10 reels) | 6 boxes (6 reels) | 10 boxes | 8 boxes | 8 boxes |